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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Inventor:** Bogumil Milkowski et al.

**Invention:** A PREFORM OF A PLASTIC CONTAINER  
PARTICULARLY FOR PACKAGING FOODSTUFFS

**Attorney's Docket Number:** IVT201

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**CLAIMS AMENDED DURING  
THE INTERNATIONAL EXAMINATION**

**AMENDED CLAIMS**

[received by the International Bureau on 18 May 2005 (18.05.05);  
original claims 1 to 9 replaced by new claims 1 to 5 (1 page)]

1. A preform of a plastic container designed particularly for packaging foodstuffs comprising a conically-shaped container body with a convex hemispherical bottom, which flares towards a cylindrical neck, characterised by the single-layer body (4) in which the external diameter of the cone as measured at the point of connection with the cylindrical part (2) is equal to the external diameter of the cylindrical part, where the cylindrical part (2) ends with a flange (3) terminated in a thickened rim (5).
2. The preform according to claim 1 is characterised by the fact that the thickness (g1) of the flange (3) as measured at a distance of approximately 0.5 mm from the flange end (3) is less than 0.25 mm (preferably app. 0.20 mm) and that the wall thickness (g1) is less than or equal to the cylindrical neck wall thickness (g2).
3. The preform according to claim (1) is characterised by that the rim (5) of the flange (3) has a annular thickening (5a) on top and underneath it, whose height (h) varies from 1.1 to 2.0 of the flange thickness (g1).
4. The perform according to claim (1) is characterised by that the rim (5) of the flange (3) has a ring-like one-sided thickening (5b) on top of it, whose height (h) varies from 1.1 to 2.0 of the flange thickness (g1).
5. The preform according to claim (1) is characterised by that the rim (5) of the flange (3) has a ring-like one-sided thickening (5c) underneath it, whose height (h) varies from 1.1 to 2.0 of the flange thickness (g1).

### Statement under Article 19 (1)

The effect of the amendments to the claims on the patent description and drawings.

The amendments made to claim 1, require that the Summary of Invention presented on page 2 contains a statement that the preform body is made of a single layer and the external diameter of the cone as measured at the point of connection with the cylindrical part is equal to the external diameter of the cylindrical part.

The amendments made to claim formerly numbered as 3 and now as 2 require that the Summary of Invention presented on page 2 specifies the thickness of the flange (3) and the point of such measurement more precisely.

The *State of Art* presented on page 1 should include information about patent US\_A-4 751 035.

International patent request No. PTC/PL2004/000092 is aimed at claiming the shape and the method of production of a plastic preform, which, in the blow-moulding process, enable one to create a plastic can that can be closed with a standard aluminium cap, using standard filling machines for aluminium cans. Most of the products packaged using the above-mentioned type of packaging contain large amounts of CO<sub>2</sub>; hence the plastic can closed with a standard aluminium cap must be sufficiently tight.

The claimed preform is characterised by a very thin flange whose thickness is comparable to that encountered in aluminium cans. A flange that is so thin and at the same time elastic is achieved as a result of the use of a special preform shape that enables a rapid and stable material flow during the injection of the material into a mould that has no steps and whose walls taper in thickness towards the flange. This enables one to achieve a good material orientation and the required strength of the crucial elements, which are the neck and flange.

We know from our experience that when the flange thickness is greater than 0.3 mm the material's structure deteriorates and the standard seaming of an aluminium cap may cause the container material to crack which would make tight closure impossible. The crucial element of the preform is a thick rim located at the end of the flange. Not only does this rim provide additional sealing, but also it prevents the flange from slipping from a lock created during the seaming process. Owing to this, as already shown by testing, the tightness of a plastic can closed using the above-mentioned method is comparable to that of an aluminium can used for packaging heavily carbonated beverages.